

Lieutenant-Colonel FOTHERINGHAM said that very little attention to the question had been necessary by the military authorities in Canada as they found practically ready to their hands at every divisional railway point exceedingly well-adapted cars in large numbers, known as "tourist" and as "colonist" cars. Stretchers could be passed into any of these cars from at least one if not both ends, the passage or corridor being diverted from the straight line down the centre of the carriage by the construction in it of a compartment either as a smoking-room or as a kitchen. The heating of the train was by steam from the engine. Each such carriage would accommodate about 40 lying down, and with its permanent cooking and washing arrangements could be very readily employed as an ambulance carriage.

Colonel MACPHERSON, in reply to the discussion, said he might mention that the Russians had a very large number and variety of ambulance trains, some of a luxurious character. The chief difficulty was the want of co-ordination and control of the wounded going down by them, and it was that point of co-ordination and control that he was specially anxious to emphasize in his paper. A point of much interest in connexion with the Russian troops was the manner in which they cleared the field of wounded by use of the light field railways and Décauville cars, which ran right up to their positions and brought the wounded very rapidly back to the main line and the wounded distribution stations there. The Russians also cleared out their wounded at Liaoyang and Mukden with great rapidity by sending trains off one after the other—*en échelon*, as it is called. There is, as the President probably knew, a Railway Committee at the War Office, on which the railway companies are represented, and no doubt this committee has fully considered the subject of this paper. As regards Colonel Joubert de la Ferté's remarks, he was aware that there were facilities for railway transport of wounded in India; but there was no real ambulance train there, and such a train seemed to be a necessity as a permanent institution for taking invalids to ports of embarkation, etc. Major Probyn had asked about the arms and ammunition of wounded. The Geneva Convention clearly protected the neutrality of ambulance trains, their personnel and the sick and wounded in them, although the arms and ammunition might be there too. As regards the size of the red cross, in his opinion the red cross could not protect from fire under modern conditions; there was indirect fire often at a distance of several miles. Besides, a train might be end on. The great thing was to have a definite colour for the whole train, white for example. In any case, the rule in war would be to fire across an ambulance train to stop it, just as neutral ships were stopped at sea until they could be boarded and examined. An ambulance train ignoring that summons to stop would do so at its peril. He did not quite agree with Lieutenant-Colonel Fotheringham's remarks about the Canada coaches. It would be impossible to take a stretcher into the Pullman and colonist cars, on account of the narrow gauge of the rails, which they were approached. The tourist and colonists' cars might be satisfactory, but he should like to ask whether the end pieces of the connecting cars hinged down so as to leave a clear space for the stretcher to be turned round, so as to enter the end door. This had been provided for in some of the cars on the European continent.

### THE INDIAN SUBORDINATE MEDICAL DEPARTMENT.

By Colonel C. H. JOUBERT DE LA FERTÉ,  
Indian Medical Service (retired).

SINCE my retirement from the Indian Medical Service, a few years ago, I have found that very little is known in England about the Indian Subordinate Medical Department, and I have been told that a short account of this important department would be of interest to the members of this Section.

#### COMPOSITION.

The Indian Subordinate Medical Department consists of two main divisions—the military and the civil.

The military division is subdivided into (1) the assistant-surgeon branch and (2) the hospital assistant branch.

In the same way the civil division consists of (1) an assistant-surgeon branch and (2) a hospital assistant branch.

Military assistant-surgeons are recruited from country-born Europeans and Eurasians only; military hospital assistants from natives of India or Burmah only. Civil assistant-surgeons are chiefly natives of India and Burmah, but a few country-born Europeans and Eurasians are to be found amongst them. Civil hospital assistants are invariably natives of India or Burmah.

The reason why the military assistant-surgeon branch is restricted to men of European parentage or descent is that their duties for most of or all their service lie with European soldiers. The European or semi-European assistant-surgeon has more authority with the British soldier than a native would have.

In a similar way the military hospital assistant serves only in the native military hospitals and with native troops.

#### STRENGTH.

The authorized strength of the military assistant-surgeon service, which is now Imperial and not Presidential was, on April 1st, 1908, 472, being the same total as formerly, when the numbers on the Presidential system were: Bengal, 257; Madras, 96; and Bombay, 119. But to this total must be added 192 men seconded for service with the civil governments, bringing the grand total up to 664. The proportion in civil employ works out at 28.9 per cent., but it should be understood that this large proportion of a military service seconded for civil employ constitutes the war reserve. All these men are liable to be recalled, and many are recalled to military duty during war. The system is a good one, and works well. The civil governments in time of peace have the benefit of the services of these men, and the military department has a permanent reserve of experienced men to call out in time of war.

In the same way with the hospital assistant branch (military) the authorized strength, on the Presidential system, on April 1st, 1908, was as follows:

Bengal	...	...	...	555
Madras	...	...	...	137
Bombay	...	...	...	169
				861

But this total is increased to 972 by the inclusion in the nominal roll given in the army list of that date of 111 men in civil employment—namely, 75 from the Bengal list, 31 from the Madras list, and 5 from the Bombay list. This gives a percentage of 11.42 in civil employ, which is insufficient as a war reserve. The authorized reserve for this service is 25 per cent. In time of war, however, volunteers are called for from the civil hospital assistant branch, and a certain number are obtained.

The whole of the military service is, of course, under the Military department, and the strength is settled by that central authority.

On the civil side the various local Governments and Administrations settle the strength of their subordinate medical departments according to their requirements for the time being. I need hardly say that the tendency is always towards an increase with the development of the country.

I have not found it possible, here in England, to ascertain the exact present strength, but the civil lists available show as follows for April, 1908:

Government of Bengal	...	146
" Madras	...	Not clear
" Bombay	...	53
" United Provinces	...	94
" Punjab	...	90
" Burmah	...	19
" Central Provinces	...	16
" Eastern Bengal and Assam	...	48
		466

Besides the foregoing a considerable number of assistant surgeons (civil) are employed in the North-West Frontier Province, Central India, Rajputana, Mysore, Travancore, Beluchistan, the Survey of India, the Public Works Department, etc., but I have been unable to obtain their numbers.

It is more impossible here to give the total number of civil hospital assistants, for though the various medical

schools yearly turn out considerable numbers of men of this class, such numbers are nothing like what are required throughout the country, both for Government and private work. The different Provinces and Administrations keep their own local lists, and these are not published.

I think I may safely say that no local Government throughout India has anything near the number of this class of medical subordinate which it requires and to which it could easily give employment, to the advantage of all concerned. In January, 1905, the United Provinces cadre was 54, or about 13 per cent., below its authorized strength of 416. During my period of administrative work in the United Provinces I succeeded in convincing the local Government of the necessity of increasing the out-turn of the Agra Medical School, and the number of civil students was increased by 50 per cent; also great improvements and enlargements were effected and more sanctioned. More of these schools and improvement in their system of education are needed throughout India.

I am sure I have the support of the opinion of most of the officers of the Indian Medical Service in stating that it is not more medical colleges for the higher education of a superior class of doctor which are needed in India, but more medical schools giving a thoroughly good education to the more humble class of hospital assistant, who should correspond to the general practitioner, whose work lies with the working classes. There is practically no middle class in India to count.

Now, as to the education and mode of recruitment of these four classes of men and the careers open to them.

#### 1. MILITARY ASSISTANT SURGEONS.

After an open competition in general education subjects, about on a standard with that required for the lesser British medical qualifications, the successful candidates enter the medical colleges at Calcutta, Madras, or Bombay as military students. They live in barracks at the colleges, under military discipline, receive a monthly allowance of Rs. 26.4 (35s.), out of which Rs. 17 are deducted for board, and they are lodged, clothed, and educated at the expense of the Government of India. The period of training—formerly three years—is now four years. During this time they go through courses of lectures, dissecting, practical work, and hospital clinical instruction, exactly like medical students in any other country. At the end of each session they are examined by their professors and teachers, all officers of the Indian Medical Service, and if the result is unsatisfactory their time at college is prolonged. At the end of the fourth year they usually pass out of college on the joint examination results, and they are sent at once to serve in military hospitals, or the larger European civil hospitals in the few largest cities, as fourth class assistant surgeons, ranking as warrant officers (subconductors).

It will be observed that though these men undergo the ordinary training of a medical student, they pass out of college on the final reports of their own teachers without obtaining any actual legal medical diploma or qualification which would entitle them to registration in England. They receive a certificate qualifying them to practise physic in India, and to designate themselves Diplomates of the Medical College of Bengal.

The reason for this is evident, and also fair. They have been educated and maintained for four years at the expense of Government, for the special purpose of serving Government in the military department. The Government considers that, in return for what it has expended in this way, it has a claim on the services of these men for a certain number of years. At the termination of their studies they are all provided with good and permanent employment at a fair rate of pay, and they have the prospect of excellent advancement and of a pension at the end of their service at the age of 55 years. A good many years ago it was customary to give these men, if they wished it, on leaving the college, certificates of having attended regular courses of lectures, etc., and hospital practice. A few of them came to England, and on these certificates presented themselves for some of the lower British qualifications which are not strict in their requirements. They were able to return to India with British qualifications. Such men were apt to become dissatisfied with their conditions of service, and some obtained their discharge, setting up in private practice.

One or two of them, to my personal knowledge, were very successful. Certificates of attendance of this kind are no longer given to students who have been educated at the expense of Government, and from the Government point of view this is perfectly rational and fair. Certificates may be given to a military pupil if, before commencing his course, he has passed the entrance examination or its equivalent, and has paid the fees laid down for casual students. The fact, however, remains that these men throughout their service do not possess a medical qualification which would entitle them to registration in Great Britain, though as a class they are as competent as most of the rank and file of doctors in other countries. It is a source of grievance with them, but they should remember that in Europe the highest medical and surgical qualifications in one country are not recognized in other countries. The M.D. London is not permitted to practise his profession in France, Switzerland, Italy, or Germany, etc., and, vice versa, foreign qualifications are not registrable in England.

In India every privilege and function to which the possession of a registered medical qualification entitles the holder is accorded to the assistant surgeon of the Indian Subordinate Medical Department. No official distinction is made between the civil surgeon of a station who is an I.M.S. man, and may be a M.D. London and a Fellow of the College of Surgeons, and another civil surgeon who is a promoted military assistant surgeon holding no registrable medical diploma.

Tracing the careers of these assistant surgeons, they serve at first in military station hospitals, or the large European hospitals at the Presidency cities, doing the work of house-surgeons, apothecaries, etc., at first under their seniors, and as they rise as seniors themselves—or alone in special appointments—those who show themselves of sufficient merit in every way are lent to the Civil Department for employment in civil independent, or semi-independent charges, such as the civil surgeoncies of the smaller stations, with charge of gaols, assistants to Indian Medical Service civil surgeons in the large stations, asylums and railway charges, special appointments in Africa, Persia, Abyssinia, etc.

In some of these posts they hold absolutely identical charges and positions with those of officers of the Indian Medical Service, and socially and professionally their position is the same. Some few men rise fully to the position, social and professional, but this is not always the case.

In military employ the assistant surgeons' grade pay is as follows:

Fourth Class	...	85 rupees monthly, or	£68 yearly
Third Class	...	110 "	88 "
Second Class	...	150 "	120 "
First Class	...	200 "	160 "
Senior or Honorary Lieutenant	...	300 "	240 "
Senior or Honorary Captain	...	400 "	320 "

There are also charge and other allowances, varying from 20 rupees to 150 rupees monthly.

In civil employ in charge of a civil station a first class assistant surgeon draws at first, with the lowest gaol allowance, about £300 a year, and has the privilege of private practice. He can rise to a rate of pay which, with the maximum gaol allowance, amounts to between £600 and £700 a year, in addition to which there would be a variable amount from private practice.

This compares very favourably with the income and position of a very large number of general practitioners in Great Britain, for the Indian Subordinate Medical Department man gets a month's leave on full pay every year, furlough on half-pay every few years, and a maximum pension of £200 yearly at the age of 55. The average income of the English general practitioner has lately been stated to be about £200, and he has to pay a substitute if he wants a holiday, and has to work on till he drops from old age.

I have omitted to say that in other civil charges of less independent nature than civil surgeoncies these men draw their grade pay with special allowances, and they often make a considerable additional income from private practice, as their posts are usually in large stations or towns.

I have been thrown a great deal in contact with the men of the Indian Subordinate Medical Department. For many

years, as one of their professors, I was connected with them as students at the Calcutta Medical College and in other ways. Subsequently I had to do with them in military hospitals and in civil employ. I have met many excellent men amongst them, for whom I had great respect and in whom I had complete confidence. I should be very glad to see most of the senior men, who are in independent charge of civil stations, become members of this Association, for they would benefit by getting the JOURNAL and would keep themselves better in touch with modern progress. But the difficulty is that though in India they are just as much "medical practitioners" as the most fully qualified graduate or licentiate, yet in the usual acceptance of the term they are not such, as they hold no diploma which could be registered in England, and there is no registration at all in India. There is no registration because it would be impossible to include practitioners of the Mohammedan and Hindu systems of medicine, and European medicine has as yet only reached a tithe of the hundreds of millions of inhabitants of India. I think, however, that the Association might elect some members of the Indian Subordinate Medical Department as extraordinary members of local Indian branches, under By-law 10, and I should be glad if this Section would express an opinion on the point. I would indicate those senior men who are in permanent civil employment in independent charges, and who are unquestionably "medical practitioners," and are recognized as such for all official and private purposes.

By-law No. 10 lays down that any Division or Branch not in the United Kingdom may elect as a "complimentary" member any qualified medical practitioner resident within the area thereof, but not eligible by birth or qualification for membership of the Association.

Military assistant surgeons in civil employ hold independent medical charge, give medical evidence in court, sign medical certificates of all sorts—including lunacy certificates, examine and report on lives for insurance; in short, perform all and every one of the functions of medical practitioners. Their medical education is identical, with some small exceptions, with that of those natives of India who become civil assistant surgeons. The latter, however, go up for the university examinations, and obtain degrees or the diploma of Licentiate in Medicine and Surgery, their course being a five years' one against the four years of their military fellow students.

## 2. MILITARY HOSPITAL ASSISTANTS.

These men undergo a course of education at the Poona and Ahmedabad medical schools in Bombay; the Rayapuram, Vizagapatam, and Tanjore schools in Madras; the Lahore school in the Punjab, and the Agra school in the United Provinces. The curriculum has recently been raised from three to four years, though the Agra rules, in Paragraph 22a, still distinctly refer to a three years' course. As the course for civil students is a four years' one, any teacher will understand the confusion and difficulty experienced in trying to teach a subject to a mixed class, where some of the students had to get a complete course in one year less than the others. This was brought to the notice of Government by myself and others apparently with good effect.

There are about one dozen large medical schools in India for the hospital assistant class, but military pupils are educated at only the above-mentioned seven schools—in Madras, Bombay, the Punjab, and the United Provinces. All these schools have an Indian Medical Service officer as Principal, but the teachers are all natives of India of the Civil Assistant Surgeon Branch, or ranking as such. The teaching and examinations are in the local vernacular in most of the schools, as are the textbooks—such as Bengali at Calcutta and Dacca; Ooriah at Cuttack; Urdu at Patna, Agra, Lahore, and Nagpore; but at the three Madras schools—Rayapuram, Tanjore, Vizagapatam—and the Bombay two schools—Poona and Ahmedabad—the English language is used, as there are more English-speaking natives in Madras and Bombay than in other parts. The standard of the preliminary examination is being gradually raised, so that more and more of these students can make use of good English textbooks, instead of inferior translations.

After their course of education at the medical school these men are sent at once to regimental or military duty

in subordinate charge of hospitals for native troops, survey parties, frontier districts, native and foreign states. The two senior classes rank as native officers, the three juniors as non-commissioned officers.

The authorized strength, 861, has already been given, the number (111) of seconded men in April, 1908, bringing the total to 972—the percentage in civil employ being only 11.42, against a nominal reserve of 25 per cent.

The old regimental system is still in force, and every native regiment still has its own regimental hospital.

The scale of pay, including English allowance, is as follows:

	Monthly.	Yearly.
	Rupees.	£
Hospital Assistant, Third Grade ...	25	= 20
" " Second Grade ...	40	= 32
" " First Grade ...	60	= 48
Senior Hospital Assistant, Second Grade ...	80	= 64
" " First Grade ...	100	= 80

The allowances are few and vary from 5 rupees to 15 rupees monthly.

There is room for considerable improvement in this branch of the Indian Subordinate Medical Department, the first thing being to demand a higher standard of preliminary education.

## 3. CIVIL ASSISTANT SURGEONS.

The civil assistant surgeon branch of the Indian Subordinate Medical Department was established in 1847 to provide a superior grade of native practitioner for Government duties in the districts or collectorates which are the units of civil administration. The service in this branch is open to Europeans, East Indians, and natives, who have educated themselves without cost to the State, and who possess a medical qualification not below the licence in medicine and surgery of an Indian university. Appointments are made either by open competition or by selection, varying according to the custom of the particular province. Each presidency or province has its own cadre, and civil assistant surgeons are not ordinarily transferable from one province to another. They form a number of separate local services, in which their promotion runs and the whole of their service is spent.

In every district there is an assistant surgeon at the head quarters station as an assistant to the civil surgeon. He is in charge of and resides at the head quarters dispensary or hospital, and is subordinate to the civil surgeon, whom he replaces when this officer is temporarily absent on duty from the station. In connexion with the eligibility to membership of this Association, I may here mention the anomaly which may and does occur of the subordinate officer being eligible for membership as the possessor of a degree or diploma, and his superior the civil surgeon, if a military assistant surgeon, being ineligible from not holding a medical qualification which can be registered.

Besides head quarter appointments there are subdivisions and large out-dispensaries held by civil assistant surgeons.

The position is a good one, and there is keen competition for these appointments amongst the young native medical men who qualify yearly from the medical colleges, or even from British schools.

The rates of pay are as follows:

	Monthly.	Yearly.
	Rupees.	£
Civil Assistant Surgeon, Third Grade ...	100	= 80
" " Second Grade ...	150	= 120
" " First Grade ...	200	= 160
" " Senior Grade ...	300	= 240

The promotion is septennial, subject to examination up to the senior grade, which is by selection. There are various allowances, such as free quarters, and private practice is permitted, which in a large city may amount to a good deal more than the pay.

From the senior grade a few of the best men are selected for a limited number of civil surgeoncies, in which they commence on 350 rupees monthly, or £280 yearly, with extra appointments and private practice. They are retired at the age of 55 on pensions calculated on the pay drawn during their service.

I have met many most excellent and successful practitioners in this service. They have the advantage of fixed pay and leave rules, excellent hospital practice, where they are in constant association in their joint work with energetic and skilful officers of the Indian Medical

Service in charge of districts. A certain number of these men are members of the Association.

#### 4. CIVIL HOSPITAL ASSISTANTS.

In speaking of the military hospital assistant class I have already mentioned that these men—the civil students—are educated at the various vernacular medical schools. They have to pass a preliminary examination in general education of a moderate standard. But this standard is gradually being raised, and at most of the schools is now that of the entrance examination. In Madras they must be matriculated students, or hold a certificate the equivalent of the Madras University matriculation. The standard is higher than that for the military student class. There is very keen competition for entry into these schools. At the one—Agra—I am best acquainted with, the number of applicants was two to three times in excess of the number which could then be admitted yearly. Medical students cannot be properly educated if the classes are too large for both lectures and practical and clinical instruction.

In a poor country like India these schools are very far from being self-supporting; the fees of the very few who pay anything at all are very low, so practically the whole cost of the schools falls upon Government. All the military and most of the civil students get a monthly allowance from Government to cover cost of living, besides getting their education free; others are paid for by missions, municipalities, etc.

There is a very large and increasing demand, both for Government employment and for private requirements, for the services of medical men of this class. Their social status is humble, their fees are small in private practice, and their pay low in Government service. They may be said to correspond to quite the lower ranks of the medical profession in Europe, those indispensable men who make their living amongst the working and labouring classes.

I have always strongly held the opinion that the various Indian local governments have failed to recognize the desirability, nay, the urgent necessity, of providing many more and better equipped medical schools for the education of this class of practitioner, who form the rank and file of those practising European medicine in the country, and by whose work the masses of the people are inclined to judge the results of European medicine.

The tendency, however, has been and still is to spend more money on the medical colleges, from which the more highly-educated assistant surgeon, of a superior social and professional status, is turned out. My experience is that these men are being turned out in excess of the demands of the country, and that for one graduate in medicine or holder of the licence in medicine and surgery the country requires and could absorb a dozen or more of the lower grade or standard. A new medical college is being built at Lucknow to commemorate the late visit to India of H.R.H. the Prince of Wales. The money collected from the public and granted in supplement by Government would have been much better spent on the establishment and maintenance of several vernacular medical schools, of which the want is great. But unfortunately both the subscribers and the Government wish for what will make more show—but be of infinitely less use to the people.

The student of the civil hospital assistant class goes through a complete course of four years' instruction, at the end of which he undergoes a pass examination. The examiners at the presidency towns are mostly Indian Medical Service officers unconnected with the school, and the examination is held in the local vernacular except where the teaching is English. At centres where a sufficient number of Indian Medical Service officers is not available the examiners are the school lecturers and teachers, which is very undesirable.

The men who pass out nearly all take Government service, and their numbers, in my experience, are never sufficient to meet the Government demand, much less the private. The list of duties to which these men are put during their first few years of service would be a long one, but may be summed up as everything where a young medical officer on small pay is needed. After a time they get settled work in charge of charitable dispensaries in villages and small towns, where they work in sole charge, inspected about four times yearly by their district civil surgeons.

The rate of pay is small, though it was increased in 1901 for those qualified in English; there are very few now in the service who are not so qualified, so the new scale only is given:

	Monthly. Rupees.	Yearly. £ s. d.
Fourth Grade, under 5 years ...	25	20 0 0
Third Grade, under 10 years ...	35	28 6 8
Second Grade, under 15 years...	45	36 0 0
First Grade, under 20 years ...	55	44 0 0
Senior Grade (by selection), over 20 years...	70	56 0 0

There are certain allowances and private practice is permitted. The amount to be made by practice, of course varies considerably according to where the work lies. It is practically *nil* for the first few years when these men are being knocked about a great deal. They are entitled to leave on pay as other classes of the Indian Subordinate Medical Department, and earn a pension by the age of 55.

I have made no allusion in this short sketch to female doctors and hospital assistants, and I fear it is far from complete. But the Indian Subordinate Medical Department, being purely a local service and locally recruited, the records relating to it at the India Office are scanty. I have had to trust mainly to my memory and to references to the army and civil lists,\* but I trust that I have brought forward some information of interest to the members of this Section who are unacquainted with India.

#### RESOLUTION.

After the reading of Colonel Joubert de la Ferté's paper the following resolution, proposed by the PRESIDENT and seconded by Fleet Surgeon E. J. BIDEN (ret.), was carried unanimously:

This Section begs to recommend to the Council that inquiries be instituted as to the practicability of admitting certain members of the subordinate Indian Medical Service to complimentary membership of the British Medical Association in accordance with By-law No. 10.

#### LESSONS FROM THE PAST.

By Surgeon-Lieutenant-Colonel E. M. WRENCH, M.V.O.,  
F.R.C.S. Eng.

It was lately stated in the *Times* newspaper that it was desirable that the lamentable tale of the political, military, and administrative mismanagement of the Crimean war should never be forgotten, and hence, as one of the survivors of that campaign, I venture to hope that an account of some of my experiences may be interesting to this Section, and instructive as a warning for the future, though the art of war has so changed during the last fifty years that the conditions that then existed can never occur again.

Our battleships were then mostly wooden sailing vessels, armed with smooth-bore 68-pounders, and these guns, which carried their shot efficiently little more than half a mile, were, with one exception, the largest used in the trenches during the eleven months' siege. Our infantry, though armed with rifles, were so ignorant of their use that a man in my regiment (the old 34th), when reprimanded for firing at the Russians fifty yards away with the sight of his Minié rifle up to 800 yards, gave as his excuse, "Shure it makes the powther shtronger."

That was a time, when, we may almost say with truth, the only known means of preserving meat was by keeping it (often for years) immersed in brine, and when, field ovens being unknown, ship's biscuit that it required a hammer to break was the only form of bread for sick and well.

I will not, however, talk of these generalities, but describe my experience when in charge of a ward of what might be called the base hospital at Balaklava in November, 1854, shortly after the battle of Inkerman, some of the wounded from which were under my care, together with cases of cholera, scorbutic dysentery, and fever. It was situated in what had been the military school of St. Nicholas, which contained several rooms about 30 feet square. There were no bedsteads or proper bedding; the patients lay in their clothes on the floor, which from the rain blown through the damaged windows and the traffic to and from the open-air latrines was as muddy as a country lane. There were no nurses, no washing conveniences, either personal or for clothing. Two old soldiers, called orderlies, did their ignorant best to attend

\* With a hasty check from some papers received from India the day before the paper was read.